CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Adopt Resolution Authorizing the City Manager to Execute a Professional Services Agreement with Camp Dresser & McKee, Inc., for Corrosion Control in the Domestic Wastewater Outfall Pipeline ($35,240) and Appropriate Funds ($60,000)

MEETING DATE: May 7, 2003

PREPARED BY: Public Works Director

RECOMMENDED ACTION: Adopt a resolution authorizing the City Manager to execute a professional services agreement with Camp Dresser & McKee, Inc., (CDM) for corrosion control in the domestic wastewater outfall pipeline ($35,235) and appropriate funds as shown below.

BACKGROUND INFORMATION: In 1999, CDM performed a study evaluating the rate of corrosion at the crown of the Domestic Wastewater Outfall pipeline. The Domestic Outfall is the main pipeline that carries the City's domestic wastewater flows from the westerly City limits to the White Slough Water Pollution Control Facility (WSWPCF), a distance of approximately six miles.

The study reported that the 35-year-old Domestic Outfall was still structurally sound. However, active hydrogen sulfide corrosion was evident, and the study predicted that, without repair or chemical treatment, the reinforcing steel in the pipeline could become exposed in about 10 years or by 2009. Chemical treatment alternatives differ with wastewater characteristics, therefore, the study recommended that various corrosion control additives be evaluated on a pilot basis to determine the most cost-effective alternative.

In accordance with the 1999 study, Staff recommends proceeding with investigating the applicability of various chemicals for corrosion control purposes within the Domestic Outfall. Chemical treatment alternatives will be developed by CDM, City forces and chemical vendors. CDM will prepare requests for proposals (RFP) for providing chemical dosing and testing services. The RFP will include information about proposed chemicals, testing approach, sampling protocol, and project summaries from previous corrosion control projects, cost estimates and schedule as reflected in the attached scope of services (Exhibit A).

The 2001-2003 Financial Plan and Budget included $60,000 for this main trunk line corrosion control study. Since this study includes only consultant services and not the cost to perform the chemical dosing trials, Council is being asked to appropriate the full amount at this time.

Staff recommends taking these proactive steps toward assessing and maximizing the life of the Domestic Outfall. The information obtained will assist the City in preparing a more comprehensive corrosion control and/or rehabilitation program.

APPROVED: _____
H. DIXON FLYNN -- CITY MANAGER

FUNDING: Wastewater Collection System Capital Maintenance Fund $ 60,000

Funding Available: _____
Vicky McAthie, Finance Director

Budget: 2001-2003 CIB Page E-20

_____
for Richard C. Prima, Jr.
Public Works Director

Prepared by Charlie Swimley, Senior Civil Engineer

RCP/CS/pmf

Attachment

cc: Wally Sandelin, City Engineer
Sharon Welch, Senior Civil Engineer
Wes Fujitani, Senior Civil Engineer
Paula Fernandez, Senior Traffic Engineer
Randy Hays, City Attorney

City of Lodi
Assistance During Trunk Sewer Corrosion / Odor Control Trials
Exhibit A
Scope of Services

Background.

The City wishes to investigate the applicability of various chemicals for corrosion control within its main outfall trunk sewer. The trunk sewer consists of 30-inch, 42-inch, and 48-inch diameter reinforced concrete pipe. Visual inspection of portions of the pipe and measure of the hydrogen sulfide concentrations indicate that hydrogen sulfide corrosion is occurring within the sewer system. Preliminary investigations (Trunk Sewer Corrosion Investigation Report, July 1999) indicate that nitrate, ferric chloride and caustic shocking techniques may be cost effective means of hydrogen sulfide corrosion control.

Purpose.

The intent of this scope is to help the City conduct a trial of corrosion control chemicals in the City's 48-inch, 42-inch and possibly the 30-inch diameter trunks.

Project Approach.

The chemical selection trial will involve efforts by CDM, the City, and chemical vendors. There is substantial preparation required prior to the trial. CDM will prepare a Request for Proposals (RFP) for providing corrosion control chemical testing services. The RFP will include background information on the Lodi trunk sewer system, project goals, and selection criteria for the vendors to prepare a responsive proposal. The RFP will solicit for information on chemicals, testing approach, sampling program, and project summaries from past or current chemical testing projects, cost estimates and schedule. Vendors may propose to use one or combination of chemicals during the testing.

CDM will review the RFPs, provide comment on the approaches and request for information, and recommend the three best approaches from the RFPs received. The City will then negotiate with the individual chemical vendors for cost, schedules, and requirements of the pilot testing.

During the testing, CDM will monitor the testing and sampling program, review testing results and evaluate the effectiveness of each chemical. The vendors will submit their final testing results and summary report to CDM for evaluation. Based on the testing results, the most cost effective approach will be chosen for long-term implementation by the City.

Trial Schedule.

Each chemical trial would take three weeks: during the first week, the vendor installs equipment and the City gathers background information including wastewater characteristics, the next two weeks the vendor feeds chemical and optimizes the system. The City will spot-check the results. At the end of the two-week period, the City measures performance. Ideally, the competing chemicals should be tested under identical flow, wastewater characteristics and temperature. But it is impossible to have identical conditions when the tests are spread out over an entire summer. Therefore, the chemical dose and wastewater characteristics and flow must be consistently monitored for a fair comparison of chemicals. Finally, two week is allowed for the sulfide levels to

rise and to establish a steady baseline condition before the next trial can begin.

Task Descriptions.

Task 1. Prepare Background Information for Preparing RFP. CDM will estimate the probable range of hydrogen sulfide level to control based on historic sampling results. CDM will develop the minimum criteria for corrosion control chemical testing and field sampling, and prepare the Request for Proposals (RFP). The City will review and provide comment on the RFP to CDM. CDM will meet with chemical vendors, if necessary, to field questions on the RFP.

Deliverables: Request for proposals

Task 2. Review and Comment on RFPs and Select Approaches. CDM will review the RFPs received for completeness and effectiveness of approach; prepare a TM summarizing the RFP's received and recommend the 3 best approaches.

Deliverables: Technical Memorandum

Task 3. Evaluate Overall Test Data and Prepare Report. CDM will evaluate data collected during the test periods, and prepare a report presenting the findings. This will consist principally of estimated annual chemical costs and operational costs for permanent facilities operated seasonally. The City will prepare a data summary tabulating its data collection effort and the vendors will tabulate the chemical use and dose. Both tables will be provided to CDM in Microsoft Excel format.

Deliverables: Final Report

Task 4. Management. CDM will prepare progress reports by task with each invoice. The City and CDM will coordinate progress meetings with site inspections of the vendor trials. The level of effort assumes that no more than three site/progress meetings will be needed.

Schedule.

These tasks including vendor chemical testing will be completed within five months after notice to proceed.

Estimated Cost.

The estimated cost for the above tasks including a ten percent contingency is $35,235 as detailed in Exhibit C. The contingency shall not be used without written consent of the City. The total cost includes labor, other direct costs, overhead and profit. The cost for project management is included. Exhibit B provides a copy of CDM's current Billing Rate Schedule.

RESOLUTION NO. 2003-74

A RESOLUTION OF THE LODI CITY COUNCIL AUTHORIZING THE CITY MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH CAMP DRESSER & MCKEE, INC., FOR CORROSION CONTROL IN THE DOMESTIC WASTEWATER OUTFALL PIPELINE, AND APPROPRIATE FUNDS FOR THE PROJECT

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council does hereby authorize the City Manager to execute a professional services agreement with Camp Dresser & McKee, Inc., for corrosion control in the domestic wastewater outfall pipeline; and

BE IT FURTHER RESOLVED that funds in the amount of $60,000.00 be appropriated from the Wastewater Collection System Capital Maintenance Fund from the 2001-03 Budget for this project.

Dated: May 7, 2003

I hereby certify that Resolution No. 2003-74 was passed and adopted by the Lodi City Council in a regular meeting held May 7, 2003, by the following vote:

AYES: COUNCIL MEMBERS – Beckman, Hansen, Howard, Land, and Mayor Hitchcock

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None

SUSAN J. BLACKSTON
City Clerk